

ANNOUNCEMENT OF WINNERS

of the seventy-eighth competition held on December 2, 2017

WINNING TEAMS

Rank	School	Team Members (in alphabetical order)
1	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Allen Liu, Sammy Luo, Yunkun Zhou
2	HARVARD UNIVERSITY	Dong Ryul Kim, Stefan Spataru, David Stoner
3	PRINCETON UNIVERSITY	Murilo Corato Zanarella, Zhuo Qun Song, Xiaoyu Xu
4	UNIVERSITY OF TORONTO	Itai Bar-Natan, Michael Chow, Dmitry Paramonov
5	UNIVERSITY OF CALIFORNIA, LOS ANGELES	Xiaoyu Huang, Konstantin Miagkov, Ni Yan

The institution with the first-place team receives an award of \$25,000, and each member of the team receives \$1,000. The awards for second place are \$20,000 and \$800; for third place, \$15,000 and \$600; for fourth place, \$10,000 and \$400; and for fifth place, \$5,000 and \$200.

In each of the following categories, the listing is in alphabetical order.

THE PUTNAM FELLOWS - THE SIX HIGHEST RANKING INDIVIDUALS

Each receives an award of \$2,500.

OMER CERRAHOGLU	Massachusetts Institute of Technology
JIYANG GAO	Massachusetts Institute of Technology
JUNYAO PENG	Massachusetts Institute of Technology
ASHWIN SAH	Massachusetts Institute of Technology
DAVID STONER	Harvard University
YUNKUN ZHOU	Massachusetts Institute of Technology

THE NEXT NINE HIGHEST RANKING INDIVIDUALS

Each receives an award of \$1,000.

ANDREW HE	Massachusetts Institute of Technology
BRICE HUANG	Massachusetts Institute of Technology
RAVI JAGADEESEN	Harvard University
DONG RYUL KIM	Harvard University
ALLEN LIU	Massachusetts Institute of Technology
ZHUO QUN SONG	Princeton University
XIAOYU XU	Princeton University
YUAN YAO	Massachusetts Institute of Technology
HUNG-HSUN YU	Massachusetts Institute of Technology

THE NEXT TEN HIGHEST RANKING INDIVIDUALS

Each receives an award of \$250.

MICHAEL CHOW University of Toronto University of California, Berkeley JUNHAO FAN **CALVIN LEE** Massachusetts Institute of Technology YANG LIU Massachusetts Institute of Technology SAMMY LUO Massachusetts Institute of Technology LINGJIE MEI Massachusetts Institute of Technology Massachusetts Institute of Technology SUNG GI PARK Massachusetts Institute of Technology **KEVIN SUN** University of Waterloo BEN WEI JIANQIAO XIA Massachusetts Institute of Technology

HONORABLE MENTION – INDIVIDUALS

OMAR ALRABIAH, Carnegie Mellon University DAVID ALTIZIO, Carnegie Mellon University RYAN ALWEISS, Massachusetts Institute of Technology

TEODOR-ANDREI ANDRONACHE, Princeton University RODRIGO ANGELO, Princeton University ITAI BAR-NATAN, University of Toronto HENRIK BOECKEN, Massachusetts Institute of Technology

JOSHUA BRAKENSIEK, Carnegie Mellon University BRIAN BURKS, University of California, Berkeley ADAM BUSIS, Harvey Mudd College EVAN CHEN, Massachusetts Institute of Technology

ERNEST CHIU, Rutgers University, MURILO CORATO ZANARELLA, Princeton University JEFFREY DAWSON, University of British Columbia

Vancouver

AARON GEORGE, University of Maryland, College Park ALBERT GEVORGYAN, University of Waterloo

EMRE GIRGIN, University of California, Los Angeles

ANDREI GRAUR, Princeton University

ZHENGYU (JARRY) GU, University of Waterloo

FENG GUI, Duke University

GEORGE HAN, Harvard University

CALVIN HSU, Massachusetts Institute of Technology XIAOYU HUANG, University of California, Los Angeles

LAZAR ILIC, California Institute of Technology JESSE KIM, Reed College

MYEONHU KIM, Columbia University JACOB KLEGAR, Harvard University

ALEKSA KONSTANTINOV, Massachusetts Institute of Technology

MICHAEL KURAL, Massachusetts Institute of Technology

ANDREW KWON, Carnegie Mellon University XUMING LIANG, Harvey Mudd College

TING-CHUN LIN, Massachusetts Institute of Technology

IAN MCMEEKING, University of Minnesota, Twin Cities ERIK METZ, University of Maryland, College Park KONSTANTIN MIAGKOV, University of California, Los Angeles

PETER MIZES, Massachusetts Institute of Technology JEET MOHAPATRA, Massachusetts Institute of Technology

ANTONIO MOLINA LOVETT, University of Waterloo JOSHUA MUNDINGER, Swarthmore College

MAX MURIN, Massachusetts Institute of Technology SHYAM NARAYANAN, Harvard University

WEERACHAI NEERANARTVONG, Massachusetts
Institute of Technology

ERIC NEYMAN, Princeton University

MINH NGUYEN, Stony Brook University

ESHAAN NICHANI, Massachusetts Institute of Technology

ALEXANDRU PASCADI, University of California, Los Angeles

HUY TUAN PHAM, Stanford University

NIPUN PITIMANAAREE, Massachusetts Institute of Technology

TRISTAN POLLNER, Princeton University QI QI, Massachusetts Institute of Technology SEYOON RAGAVAN, Princeton University SUSHRUTHA REDDY, Massachusetts Institute of Technology SAMUEL REINEHR. Colorado School of Mines VICTOR REIS, Cornell University TAHSIN SAFFAT, Massachusetts Institute of Technology SIVAKORN SANGUANMOO, University of Wisconsin -Madison MENGYI SHAN, Harvey Mudd College ZHENGYUAN SHANG. California Institute of Technology RORY SOIFFER, University of Washington STEFAN SPATARU, Harvard University FRANSISCA SUSAN, Massachusetts Institute of

MICHAEL TANG, Massachusetts Institute of Technology ANZO (ZHAO YANG) TEH, University of Waterloo HARISH VEMURI, Yale University DANIELLE WANG, Massachusetts Institute of Technology FENGYANG WANG, University of Waterloo PATRICK WANG, Massachusetts Institute of Technology WEIYU WANG, Cornell University FARRELL ELDRIAN WU, Massachusetts Institute of Technology JONATHAN XIA, University of California, Berkeley NI YAN, University of California, Los Angeles XUERUI YANG, Syracuse University YUEPENG YANG, Carnegie Mellon University KAI ZHENG, Princeton University

HANZHI ZHENG, Stanford University

ELIZABETH LOWELL PUTNAM PRIZE

The winner receives an award of \$1,000.

NI YAN University of California, Los Angeles

HONORABLE MENTION - TEAMS

CARNEGIE MELLON UNIVERSITY
COLUMBIA UNIVERSITY
HARVEY MUDD COLLEGE
UNIVERSITY OF CALIFORNIA, BERKELEY
UNIVERSITY OF WATERLOO

Technology

Omar Alrabiah, David Altizio, Joshua Brakensiek Quang Vu Dao, Nguyen Dung, Myeonhu Kim Shyan Akmal, Adam Busis, Jordan Haack Brian Burks, Jiannan Jiang, Jonathan Xia Sina Abbasi, Albert Gevorgyan, Anzo (Zhao Yang) Teh

THE WILLIAM LOWELL PUTNAM MATHEMATICAL COMPETITION WAS PREPARED BY:

DANIEL ULLMAN, George Washington University – Director of the Competition MARK KRUSEMEYER, Carleton College – Associate Director of the Competition BYRON WALDEN, Santa Clara University – Chair of the Questions Committee HARM DERKSEN, University of Michigan – Member of the Questions Committee IOANA DUMITRIU, University of Washington – Member of the Questions Committee

Score-Rank Correspondence

Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
90	1	70	21	55	66.5	41	184	27	484	13	933
89	2	69	22.5	54	68.5	40	207	26	497.5	12	1005
88	3	68	24	53	72.5	39	233.5	25	505.5	11	1115.5
87	4	67	25	52	81	38	255	24	517	10	1274.5
85	5	66	26	51	93.5	37	270	23	538.5	9	1448
82	6	64	28	50	107.5	36	276	22	575	8	1565.5
81	7	63	30	49	122	35	281	21	621.5	6	1614
80	8	62	31.5	48	134	34	289.5	20	693.5	5	1620.5
79	10.5	61	34	47	142.5	33	302.5	19	771	4	1643
78	13.5	60	39	46	149.5	32	326	18	823	3	1693.5
75	15	59	45	45	154	31	358.5	17	856	2	1836.5
73	16	58	51	44	158	30	397	16	872.5	1	2146
72	17	57	59	43	162.5	29	439	15	885.5	0	3493
71	19	56	64.5	42	171	28	467	14	903.5		

Frequency Distribution of Problem Scores of the Top 502 Contestants

Score	A1	A2	A3	A4	A5	A6	B1	B2	В3	B4	B5	В6
10	352	230	111	87	10	2	267	233	225	9	32	3
9	39	9	21	1	0	0	116	62	9	4	17	1
8	34	6	12	40	4	3	54	32	4	4	5	2
7	0	0	0	0	2	0	1	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
2	18	12	45	24	0	7	37	84	41	1	13	2
1	6	5	22	0	1	4	13	21	8	3	38	2
0	50	159	72	152	163	40	3	49	75	132	72	94
NA	3	81	219	198	322	446	11	21	140	349	325	398

Students Ranked 1-184

Listed by university in alphabetical order

Brigham Young University, Provo, UT

Joseph Ward

California Institute of Technology, Pasadena, CA

Andrew Bai Lazar Ilic Alexander Meiburg

Zachary Chase Gideon Leeper Zhengyuan Shang

Carnegie Mellon University, Pittsburgh, PA

Maxwell Aires Pranav Devarakonda Jung Joo Suh

Omar Alrabiah Cody Johnson Zachary Sussman

David Altizio Andrew Kwon Jianming Wang

Alyazeed Basyoni George Lu Yuepeng Yang

Joshua Brakensiek Yiwei Lyu
Corwin de Boor Fei Peng

Colorado School of Mines, Golden, CO

Samuel Reinehr

Columbia University, New York, NY

Quang Vu Dao Matthew Lerner-Brecher

Myeonhu Kim Shangzhou Xia

Cornell University, Ithaca, NY

Qingxuan Jiang Shruthi Sridhar

Victor Reis Weiyu Wang

Courant Institute of Mathematical Sciences, New York University, New York, NY

Aadil Bhore

Duke University, Durham, NC

Feng Gui Zhenhua Liu

Junghyun Hwang Yikai Wu

Harvard University, Cambridge, MA

George Han Dong Ryul Kim Laura Pierson

Matthew Hase-Liu Jacob Klegar Stefan Spataru

Ravi Jagadeesen Shyam Narayanan David Stoner

Harvey Mudd College, Claremont, CA

Shyan Akmal Xuming Liang Ziyang Zhang

Adam Busis Mengyi Shan

Massachusetts Institute of Technology, Cambridge, MA

Varkey Alumootil Yang Liu Maya Sankar

Ryan Alweiss Sammy Luo Mehtaab Sawhney

Kevin Beuchot Lingjie Mei Kevin Sun

Henrik Boecken Peter Mizes Fransisca Susan

Anton Cao Jeet Mohapatra Michael Tang

Omer Cerrahoglu Srijon Mukherjee Ashwath Thirumalai

Kevin Chang Max Murin Girishvar Venkat

Evan Chen Weerachai Neeranartvong Patrick Wang

Jiyang Gao Eshaan Nichani Danielle Wang

Andrew He Zachary Obsniuk Farrell Eldrian Wu

Calvin Hsu Sung Gi Park Jiangiao Xia

Brice Huang Junyao Peng Joshua Xiong

Kritkorn Karntikoon Nipun Pitimanaaree Allen Yang

Aleksa Konstantinov Qi Qi Kevin Yang

Samuel Korsky Akshay Ravikumar Yuan Yao

Michael Kural Sushrutha Reddy Hung-Hsun Yu

Calvin Lee Nikhil Reddy Rachel Zhang

Ting-Chun Lin Tahsin Saffat Yunkun Zhou

Allen Liu Ashwin Sah

Michigan State University, East Lansing, MI

Mohit Bansil

Ohio State University, Columbus, OH

Ankan Bhattacharya

Princeton University, Princeton, NJ

Teodor-Andrei Andronache Changshuo Liu Yang Song

Rodrigo Angelo Eric Neyman Matthew Tyler

Murilo Corato Zanarella Tristan Pollner Gabriel Vercelli

Andrei Graur Seyoon Ragavan Xiaoyu Xu

Miles Lee Zhuo Qun Song Kai Zheng

Reed College, Portland, OR

Jesse Kim

Rensselaer Polytechnic Institute, Troy, NY

Paween Pitimanaaree

Rutgers University, Piscataway, NJ

Ernest Chiu Michael Wang

St. Olaf College, Northfield, MN

Jakob Hofstad

Stanford University, Stanford, CA

John Mistele Huy Tuan Pham Hanzhi Zheng

Stony Brook University, Stony Brook, NY

Minh Nguyen

Swarthmore College, Swarthmore, PA

Zhicheng (John) Fan Joshua Mundinger

Syracuse University, Syracuse, NY

Xuerui Yang

Tufts University, Medford, MA

Phong Hoang

University of British Columbia Vancouver, Vancouver, BC, Canada

Jeffrey Dawson Sina Saleh Heng (Henry) Xia

University of Calgary, Calgary, AB, Canada

Reginald Lybbert

University of California, Berkeley, Berkeley, CA

Brian Burks Jiannan Jiang Jonathan Xia

Junhao Fan Brian Liu Yuanning Zhang

University of California, Los Angeles, Los Angeles, CA

Emre Girgin Konstantin Miagkov Ni Yan

Xiaoyu Huang Alexandru Pascadi

Ruizhe Jia Ken Willyard

University of Chicago, Chicago, IL

Alberto san Miguel Malaney Vijay Srinivasan

University of Iowa, Iowa City, IA

Patrick Hiatt

University of Maryland - Baltimore County, Baltimore, MD

Sean Owen

University of Maryland, College Park, College Park, MD

Aaron George Erik Metz

University of Michigan, Ann Arbor, Ann Arbor, MI

Stephen Jasina Noah Luntzlara

University of Minnesota, Twin Cities, Minneapolis, MN

Ian McMeeking

University of Oklahoma, Norman, OK

Christoph Kinzel

University of Rochester, Rochester, NY

Zachary Polansky

University of Toronto, Toronto, ON, Canada

Itai Bar-Natan Lexiao Lai Dmitry Paramonov

Michael Chow

University of Washington, Seattle, WA

Thomas Browning Dalai Chadraa Rory Soiffer

University of Waterloo, Waterloo, ON, Canada

Albert Gevorgyan Antonio Molina Lovett Ben Wei

Zhengyu (Jarry) Gu Anzo (Zhao Yang) Teh Rui Ming Xiong

Billy Jin Fengyang Wang

University of Wisconsin - Madison, Madison, WI

Daotong Ge Sivakorn Sanguanmoo

Virginia Tech, Blacksburg, VA

Will Craig

Washington University in St. Louis, University City, St. Louis, MO

Nathan Smith

Yale University, New Haven, CT

Aaron Berger Yuxuan Ke Jason Schuchardt

Daniel Gershenson Luke Peilen Harish Vemuri

Students Ranked 207-497.5

Listed by university in alphabetical order

Amherst College, Amherst, MA

Jekabs Mezinskis

Arizona State University, Tempe, AZ

John House Liam Lawson

Boston University, Boston, MA

Yuan Liao

Brigham Young University, Provo, UT

Erik Parkinson Jared Schaumann

Brown University, Providence, RI

Michael Mueller Timothy Sudijono

George Spahn David Wu

Bucknell University, Lewisburg, PA

Eben Blaisdell

California Institute of Technology, Pasadena, CA

Jing Ding Mayank Pandey Yanke Song

David Fager Alden Rogers Matthew Weidner

California State University at Fullerton, Fullerton, CA

Wesley Whiting

Carleton College, Northfield, MN

lan Seong

Carleton University, Ottawa, ON, Canada

Trevor Thompson

Carnegie Mellon University, Pittsburgh, PA

Trevor Arashiro Samuel Kim Tudor Popescu

Anirudh Baddepudi Rohit Kopparthy Wenze Shi

John Bostanci Philip Lamkin Michael Spoerl

Darshan Chakrabarti Weihan Li Alan Sun

Eric Chen Beilin Li Huachen (Brian) Sun

Zhijie Chen Hang Liao Liam Thomas

Keven Chionh Patrick Lin Brian Wei

Wenxin Ding Jung Hwan Min Peter Wu

Manuel Fernandez Sidhanth Mohanty Victor Xu

Gunmay Handa Tanuj Nayak Taisuke Yasuda

Scott Harvey-Arnold David Neiman David Zeng

Mikhail Ivkov Brendan Ney Xiaorong (Sean) Zhang

Raymond Kang Eric Nie Emily Zhu

Case Western Reserve University, Cleveland, OH

Benjamin Cheung

Colby College, Waterville, ME

Yin Li

Colgate University, Hamilton, NY

Kevin Christian Wibisono

Colorado School of Mines, Golden, CO

Matthew Iverson

Columbia University, New York, NY

Nguyen Dung Noah Miller Michael Tong

Cornell University, Ithaca, NY

Shuli Chen Sujit Rao Alexander Xue

Aryeh Krischer Jason Snyder

Courant Institute of Mathematical Sciences, New York University, New York, NY

Matthew Chu Samarth Tiwari

Tatiana Ezubova Hongkang Yang

Duke University, Durham, NC

Trung Can Joey Li Shicheng Rao

Alexandru Damian Liang Lyu Xunjing Wei

East Los Angeles College, Monterey Park, CA

Bingyue Bei

George Mason University, Fairfax, VA

Julian Benali Marvin Castellon

Georgia Institute of Technology, Atlanta, GA

Shyamal Patel Kalen Patton

Grinnell College, Grinnell, IA

Jonathan Sadun Ge Zhi

Harvard University, Cambridge, MA

Zihong Chen Mark Kong Vaughan McDonald

Serina Hu Allen Liu Alec Sun

Harvey Mudd College, Claremont, CA

Jordan Haack Steven Litvack-Winkler Daniel Zhang

Christopher Hoyt Christopher McElroy

Jacky Lee Olivia Watkins

Haverford College, Haverford, PA

Kaito Nakatani

Indian University, Bloomington, Bloomington, IN

Baptiste Dejean

Indiana University South Bend, South Bend, IN

Phillip Marmorino

Iowa State University, Ames, IA

Matthew Slane

Johns Hopkins University, Baltimore, MD

Jasen Zhang Xudong Zheng

Kalamazoo College, Kalamazoo, MI

Abhay Goel Jacob Naranjo

Lehigh University, Bethlehem, PA

Chesphongphach Buranasilp

Massachusetts Institute of Technology, Cambridge, MA

Bryan Chen Jason Lu Suchan Vivatsethachai

Matthew Ellison Eric Lu Thuy-Duong Vuong

Rogers Epstein Faraz Masroor Tony Wang

Saroja Erabelli Gabriel Mintzer Kuo-An Wei

Zachary Farr Saranesh Prembabu Julian Wellman

Maxwell Fishelson Jacob Pritzker Sze Nga Wong

Meghal Gupta Oron Propp Lisa Yang

Kaarel Haenni Pachara Sawettamalya Richard Yi

Satvat Jagwani Aaditya Singh Kendall Yu

Sujay Kazi Jack Spilecki

Justin Lim Yotaro Sueoka

McGill University, Montreal, QC, Canada

Ndiame Ndiaye Gueorgui Savadjiev

Miami University, Oxford, OH

Robert Krueger

Northwestern University, Evanston, IL

Ruohong Zhang Timothy Zhou

Oberlin College, Oberlin, OH

Liam Axon

Princeton University, Princeton, NJ

Nathan Bergman Alexandre de Faveri Samuel Mathers

Jackson Blitz Simona Diaconu Zachary Stier

Joao Cesar Campos Vargas Bill Huang Roger Van Peski

Kapil Chandran Fatih Kaleoglu Jacob Wachspress

Serban Eugen Cicortas Alec Leng

Purdue University, West Lafayette, IN

Simon Langowski

Queens College, Flushing, NY

Moshe Dinowitz

Rensselaer Polytechnic Institute, Troy, NY

Owen Goff

Rice University, Houston, TX

Mark Saving Anh Tran

Rochester Institute of Technology (RIT), Rochester, NY

Lucas Stefanic

Rowan University, Glassboro, NJ

Patrick Bray

Rutgers University, Piscataway, NJ

Terence Coelho Steve Hsu Anton Maliev

San Jose State University, San Jose, CA

Phat Nguyen

Simon Fraser University, Burnaby, BC, Canada

Ningxin Wei

Skidmore College, Saratoga Springs, NY

Kaifeng Yang

Stanford University, Stanford, CA

Bryce Cai Sagnik Majumder Brian Zhang

Andrew Chen Yelena Mandelshtam Nina Zubrilina

Pengda Liu Sam Redmond

Stony Brook University, Stony Brook, NY

Joe Suk

Swarthmore College, Swarthmore, PA

Vickram Rajendran

Tennessee Technological University, Cookeville, TN

Muzakhir Amanzholov

Texas A&M University, College Station, TX

Matthew Kroesche Jordan Lamkin Advait Parulekar

Truman State University, Kirksville, MO

Hieu Le Nils Palumbo

University of British Columbia Vancouver, Vancouver, BC, Canada

Dac Nhan Tam Nguyen Lucca Siaudzionis Brandon Zhang

University of California, Berkeley, Berkeley, CA

Preetham Reddy Gujjula Joshua Lin Elliot Stahnke

Tae Hyung Kim Gaurav Rao Benjamin Wu

James Leng Xingyou Song Borong Zhang

University of California, Davis, Davis, CA

Yupeng Li

University of California, Los Angeles, Los Angeles, CA

Anshul Adve Yicheng Duan Ranze Xie

Osman Akar Bryan Hu

Junfu Chen Eric Wang

University of California, Santa Barbara, Santa Barbara, CA

Ethan Epperly Alex Xu

University of California, Irvine, Irvine, CA

Zhijing Wang

University of California, San Diego, La Jolla, CA

Maxwell Morehead Alexander Wong Yichi Zhang

University of Chicago, Chicago, IL

Fiona Brady Pranav Nanga

Carson Collins Siang Tseng

University of Illinois at Urbana - Champaign, Urbana, IL

Ziyi Chen Phillip Harris Zhonglue Wang

Samuel Guo Dun Ma

University of Maryland, College Park, College Park, MD

Justin Hontz Pratik Rathore Jason Zou

University of Massachusetts Amherst, Amherst, MA

James Hagborg

University of Michigan, Ann Arbor, Ann Arbor, MI

Shiliang Gao Alexey Nigin Juntai Zhou

William Garland Xuzhi Zhang

University of Minnesota, Twin Cities, Minneapolis, MN

Beren Gunsolus Utkarsh Koshti Nicholas White

University of Nebraska - Lincoln, Lincoln, NE

Alex Heitzman Zachary Warneke

University of North Carolina - Chapel Hill, Chapel Hill, NC

Shengding Sun Robert Zeller

University of Notre Dame, Notre Dame, IN

Schoenbauer Matthew

University of Oklahoma, Norman, OK

Andy Jarnevic Benjamin Thompson

University of Pennsylvania, Philadelphia, PA

Brandon Lin Pedro Sacramento de Oliveira William Wang

University of Rochester, Rochester, NY

David Soukup

University of Texas at Austin, Austin, TX

Joseph Downs Michael Lange Ewin Tang

Jackson Hall Alexander Li

Jeffrey Huang Wyatt Reeves

The University of Texas at Dallas, Richardson, TX

Otto Osterman

University of Toronto, Toronto, ON, Canada M4K

Rafael Aznar Adrian Carpenter Anthony Moshe Roitman

University of Washington, Seattle, WA

Everett Cheng Jifan Zhang

University of Waterloo, Waterloo, ON, Canada

Sina Abbasi Ting Han (Tony) Hu Erlang Surya

Felix Bauckholt Simon Huang Xinyu (Lily) Wang

Joakim Blikstad Jacob Jackson Spencer Whitehead

Clive Chan Andrew Jay Jun Yan

Robert Cummings Yesung Jung Jason Yuen

Thinula De Silva Andean Medjedovic Yangrong Zhao

University of Wisconsin - Madison, Madison, WI

Xiaxin Li Liding Yao

Villanova University, Villanova, PA

Mathias Wanner

Virginia Tech, Blacksburg, VA

Peter Steele

Wake Forest University, Winston-Salem, NC

Linde Yang

Washington and Lee University, Lexington, VA

Hung Chu

Washington University in St. Louis, University City, St. Louis, MO

Matthew Ehren Alexander Mason Joseph Walegir

Caleb Ji Stella Schindler

Wesleyan University, Middletown, CT

Samuel Bidwell Di Chen

Western Washington University, Bellingham, WA

Sean Haight

Williams College, Williamstown, MA

Daishiro Nishida Hunter Wieman

Minh Tuan Tran Ruichen Wu

Yale University, New Haven, CT

Alexander Atanasov Noah Kravitz Hien Chi Tong

Jau Tung Chan Matthew Larson Yunus Tuncbilek

Alexander Cohen Eliot Levmore Lifeng Wang

Elaine Hou Andrew Salmon Christopher Xue

Anthony Ji Alexander Schlesinger

York University, Toronto, ON, Canada

Jordan Teitelbaum